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Christopher J. Clements

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OWENS CORNING
2790 COLUMBUS ROAD
GRANVILLE, OH 43023

EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION***Response to Amendment***

Applicant's amendment to the claims filed April 4, 2008 has been entered. Claims 1, 4, 11, 12, and 21 are currently amended. Claims 27-31 are new. Claims 3, 9, 13, 14, 17-20, 22, 25 and 26 have been canceled. Claims 1, 2, 4-8, 10-12, 15, 16, 21, 23, 24 and 27-31 are pending and under examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knuttson et al. (US 5,766,541), which incorporates U.S. Patent 4,569,471 to Ingemansson et al. by reference, in view of Delvaux et al. (US 6,254,810) and Chiu et al. (US 6,800,364).

Regarding claim 1, Knutsson et al. teach a method for making preforms from glass fiber strands wherein the glass fiber strands are texturized by separation to form a wool type product (col. 3, lines 50-55) prior to entry into the mold through a texturizing gun (Figure 9). The binder, such as a phenolic binder, water as a wetting agent, and glass fibers are fed into the mold (col. 3, lines 36-57), the mold is heated to cure the binder and the glass strands (col. 9, lines 52-67) and the mold are cooled to form the preform (col. 8, lines 25-32). Additionally, U.S. Patent 4,569,471 to Ingemansson et al., which is incorporated by reference into Knuttson et al. at col. 9, lines 8-12 disclose the texturized wool-like fiber may travel through a hose prior to being fed into the mold ('541: col. 12, lines 8-11; '471: Figure 3, element (50)). Further, Knuttson et al.

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disclose the binder preferably comprises about 2% to about 10% by weight of the preform (col. 4, lines 14-19). Knutsson et al. do not expressly disclose the binder is sugar in liquid form or that the sugar is at least partially caramelized.

However, Chiu et al. teach employment of a sucrose solution binder (Abstract; col. 4, lines 30-67) that can replace phenolic binders wherein the preform is heated to a temperature of about 200 °C to 300 °C (i.e. at least partially caramelizes the sugar) to drive off liquid from the binder to convert the sugar to an infusible, insoluble form (col. 5, lines 42-46) and Delvaux et al. (Abstract; col. 3, lines 18-66) teach formation of a strong protective coating for a fabric made of glass fibers wherein the protective coating contains sugar.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Knutsson et al. and to have employed a sugar solution, heated to at least partially caramelize the sugar, as suggested by Chiu et al. and Delvaux et al. in the method disclosed by Knuttson et al., for the purpose, as suggested by Delvaux et al., of providing an excellent protective cover for the fabric (Abstract) and for the purpose, as suggested by Chiu et al., of replacing the phenolic binder of Knuttson et al. with an environmentally friendly binder (col. 4, lines 31-48).

As to claim 2, the fibers employed by Knuttson et al. are continuous (col. 3, lines 50-58).

As to claim 4, Knuttson et al. disclose feeding the binder and strands simultaneously (col. 8, lines 45-60).

As to claim 5, Knuttson et al. disclose a shape corresponding to a muffler (Figure 2; col. 3, lines 8-22).

As to claim 6, the preform (10) is removed from the mold (22) (Figure 3).

As to claim 8, the mold employed by Knuttson et al. is perforated (col. 4, lines 20-35).

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As to claim 10, Knuttson et al. pass air through the perforated preform mold for cooling (col. 8, lines 7-16).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knuttson et al. (US 5,766,541), which incorporates U.S. Patent 4,569,471 to Ingemansson et al. by reference, in view of Delvaux et al. (US 6,254,810) and Chiu et al. (US 6,800,364), as applied to claims 1, 2, 4-6, 8, and 10 above and further in view of Golden et al. (US 5,317,037).

As to claim 7, the combination teaches the method as set forth above. The combination does not expressly teach the melting point of the sugar. However, Golden et al. provide evidence that sugars known to be suitable as binders, such as sucrose, dextrose, and fructose, have a melting point in the range of 120 °C (248 °F) to 175 °C (347 °F) (col. 2, lines 52-58). The examiner notes that the disclosed melting point of the sugars is well above the lower limit set forth in the claim.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed a sugar such as sucrose, fructose, or dextrose as the sugar binder in the combination set forth above for the purpose of employing readily available and well-known sugars known to be effective as a binders.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knuttson et al. (US 5,766,541), which incorporates U.S. Patent 4,569,471 to Ingemansson et al. by reference, in view of Delvaux et al. (US 6,254,810) and Chiu et al. (US 6,800,364), as applied to claims 1, 2, 4-6, 8, and 10 above, and further in view of Lewis et al. (US 2003/0087095).

As to claim 31, the combination teaches the method set forth above. The combination does not teach employment of the claimed sugar syrups. However, Lewis et al. teach a method

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of employing sugar as a binder wherein they teach that corn syrup and high fructose corn syrup are suitable sugar based binders and suggest their equivalence to sucrose (paragraph [0008]).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Knuttson et al. and to have employed corn syrup or high fructose corn syrup as the binder since Lewis et al. suggest that they are an equivalent alternative form of sugar suitable for employment as a binder (MPEP 2144.06-2144.07).

Allowable Subject Matter

Claims 11, 12, 15, 16, 21, 23, 24 and 27-30 are allowed.

Response to Arguments

Applicant's arguments filed April 4, 2008 have been fully considered, but are moot in view of the new ground of rejection set forth above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. W./
Examiner, Art Unit 1791

July 22, 2008

/Monica A Huson/

Primary Examiner, Art Unit 1791

